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| 09/516,859 | 03/02/2000 | Drew Bertagna | 134/005 | 4216 |

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| EXAMINER |
|---|
| JUNTIMA, NITTAYA |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2663 | |

DATE MAILED: 04/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1) ☒ Responsive to communication(s) filed on _02 March 2000_ .

2a) ☐ This action is **FINAL**.    2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4) ☒ Claim(s) _1-17_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☒ Claim(s) _17_ is/are allowed.

6) ☒ Claim(s) _1-2,5-8,11-15_ is/are rejected.

7) ☒ Claim(s) _3,4,9,10 and 16_ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on _02 March 2000_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All  b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

## DETAILED ACTION

### *Specification*

1.    The disclosure is objected to because of the following informalities:

-    on page 5, line 13, "101-109" should be changed to "111-119."

Appropriate correction is required.

### *Claim Objections*

2.    Claims 5-6 and 11-12 are objected to under 37 CFR 1.75(c), as being of improper

dependent form for failing to further limit the subject matter of a previous claim. Applicant is

required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent

form, or rewrite the claim(s) in independent form. The limitations "the first priority value is

included in the packet as received" in claims 5 and 11, and "the second priority value is included

in the packet as transmitted" in claims 6 and 12 do not further limit the limitations "receiving a

packet including a first priority value" and "transmitting the packet including the second priority

value" as cited in parents claims 1 and 8.

### *Claim Rejections - 35 USC § 103*

3.    The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person

having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

**Claims 1-2, 5-6, 7-8,** and **11-15** are rejected under 35 U.S.C. 103(a) as being

unpatentable over an applicant's admitted prior art, an IEEE standard 802.1Q.

Per **claim 1,** an applicant's admitted prior art, an IEEE standard 802.1Q, teaches

***remapping packet priority in a data communication switch having a plurality of ports*** (a bridge

in a LAN which consists of a plurality of ports as known in the art, pg. 1, lines 15-18) ***receiving***

***a packet*** (a Std. 802.1Q-compliant packet) ***including a first priority value*** (the inbound tag

priority) ***on a first port*** (a reception port) (pg. 1, lines 15-21), ***determining a second priority***

***value*** (the outbound tag priority) ***based on the first priority value*** (the inbound tag priority) ***and***

***the virtual trunk value*** (the virtual trunk value is not defined, therefore, it reads on the reception

physical port identifier) (pg. 1, lines 18-21), and ***transmitting the packet including the second***

***priority value*** (the outbound tag priority) ***on a second port*** (a transfer port or a relay port) (as

part of a forwarding process, the received packet is forwarded along with the outbound tag

priority via a transfer port or a relay port, which may be connected to a bus or a trunk, to other

bridge port to be transmitted to a destination device as known in the art).

An applicant's admitted prior art, an IEEE standard 802.1Q, does not teach determining a

virtual trunk value based on a plurality of values. However, it would be obvious to one skilled in

the art to determine the reception physical port identifier (a virtual trunk value) of the bridge by

simply obtaining and reading the bits values (a plurality of values) assigned to the reception

physical port as part of addressing scheme for port identification as known in the art.

Per **claim 8,** an applicant's admitted prior art, an IEEE standard 802.1Q, teaches

***remapping packet priority in a data communication switch having a plurality of ports*** (a bridge

in a LAN which consists of a plurality of ports as known in the art, pg. 1, lines 15-18) *receiving*

*a packet* (a Std. 802.1Q-compliant packet) *including a first priority value* (the inbound tag

priority) *on a first port* (a reception port) (pg. 1, lines 15-21), *determining a second priority*

*value* (the outbound tag priority) *based on the first priority value* (the inbound tag priority) *and*

*an identifier of the first port* (the reception physical port identifier) (pg. 1, lines 18-21), and

*transmitting the packet including the second priority value* (the outbound tag priority) *on a*

*second port* (a transfer port or a relay port) (as part of a forwarding process, the received packet

is forwarded along with the outbound tag priority via a transfer port or a relay port, which may

be connected to a bus or a trunk, to other bridge port to be transmitted to a destination device as

known in the art).

An applicant's admitted prior art, an IEEE standard 802.1Q, does not teach that a

plurality of other values includes an identifier of the first port. However, it is well known in the

art that an identifier of the port, i.e. the reception physical port identifier in this case, is included

in a plurality of bits (a plurality of other values) which is assigned to the reception physical port

as part of the addressing scheme for port identification.

**Claim 13** is a network interface claim corresponding to method claim 1, and is rejected

under the same reason set forth in claim 1 with the addition that an applicant's admitted prior art,

an IEEE standard 802.1Q, does not teach i) an access controller, ii) a switching engine, iii) a first

element, and iv) a second element. However, it would have been obvious to one skilled in the art

to include i) an access controller having a port to receive the packet for processing, ii) a

switching engine for successful packet processing, i.e. packet priority remapping, by transferring

the packet from the access controller, transmitting a plurality of values (a plurality of bits) to a

first element, receiving a virtual trunk identifier (the reception physical port identifier) from the

first element, transmitting the virtual trunk identifier and the first priority value to a second

element, receiving a second priority value in response, and transmitting the packet with the

second priority value, iii) as known in the art a first element may be a database or table which

contains an entry for the given a plurality of bit values and the corresponding virtual trunk

identifier for port identification as part of the addressing scheme, and iv) a second element may

be a database or table which contains an entry for the given virtual trunk identifier and the first

priority value similar to the user priority regeneration table taught by an applicant's admitted

prior art, an IEEE standard 802.1Q, for obtaining a second priority value.

Per **claims 2** and **14**, an applicant's admitted prior art, an IEEE standard 802.1Q, does not

teach that the plurality of values includes an identifier of the first port. However, the plurality of

bits values (a plurality of values) assigned to the reception physical port is an identifier of the

reception port (the first port).

Per **claims 5** and **11**, an applicant's admitted prior art, an IEEE standard 802.1Q, teaches

that *the first priority value* (the inbound tag priority) *is included in the packet as received* (pg. 1,

lines 15-18).

Per **claims 6** and **12**, an applicant's admitted prior art, an IEEE standard 802.1Q, teaches

that *the second priority value* (the outbound tag priority) *is included in the packet as tranmitted*

(as part of a forwarding process, the received packet is forwarded along with the outbound tag

priority via a transfer port or a relay port which may be connected to a bus or a trunk to other

bridge port to be transmitted to a destination device as known in the art).

Per **claim 7**, an applicant's admitted prior art, an IEEE standard 802.1Q, fails to teach reducing the plurality of values to a smaller-bit value and using the smaller-bit value in a table look-up. However, it is well known in the art to reduce or compress a plurality of bits to save memory space. Therefore, it would have been obvious to one skilled in the art to reduce or compress a plurality of bits (a plurality of values) into a compressed bit value to save memory space in a table look-up which contains the corresponding reception physical port identifier for port identification in an addressing scheme.

Per **claim 15**, an applicant's admitted prior art, an IEEE standard 802.1Q, teaches that *the received packet includes a VLAN identifier* (a VLAN identifier is included in a received tagged packet, pg. 1, lines 9-11 and 15-18)

### *Allowable Subject Matter*

4.      Claims 3-4, 9-10, and 16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5.      Claim 17 is allowed. The following is a statement of reasons for the indication of allowable subject matter: a switch engine coupled to the access controller for receiving the packet from the access controller, for consulting a plurality of databases to resolve a second priority value from a plurality of values including an identifier of the port, the VLAN identifier and the first priority value and for transmitting the packet including the second priority value.

### *Conclusion*

6.    The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-    Fite, Jr. et al. (USPN 6,252,888), disclosing providing data communications among network devices using tagged and untagged frame formats;

-    Crinion et al. (USPN 6,181,699), disclosing a content addressable memory for storing port identifiers, tagging information, and priority information as lookup data;

-    Kawafuji et al. (USPN 5,999,536), disclosing a router with a plurality of interfaces and a memory table containing VLAN ID and corresponding port numbers for communicating with a plurality of LANs;

-    Williams et al. (USPN 6,515,993 B1), disclosing an integrated multiport switch for altering VLAN tags on a port by port basis; and

-    Rijhsinghani et al. (USPN 6,526,052 B1), disclosing a switch for routing communications to destinations, within a VLAN system capable of configuring multiple types of VLANs, based upon predefined rules of precedence.

7.    Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nittaya Juntima whose telephone number is 703-306-4821. The examiner can normally be reached on Monday through Friday, 8:00 A.M - 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-9408 for regular communications and 703-827-9314 for After Final communications.

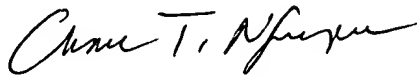Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is 703-305-3900.


Nittaya Juntima
April 22, 2003
NJ

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
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